A38.E365
JACC March 9, 2010
Volume 55, issue 10A

CARDIAC FUNCTION AND HEART FAILURE

BASELINE SYSTOLIC BLOOD PRESSURE AND OUTCOMES IN PATIENTS WITH HEART FAILURE AND PRESERVED EJECTION FRACTION - RESULTS FROM THE I-PRESERVE TRIAL

ACC Poster Contributions
Georgia World Congress Center, Hall B5
Tuesday, March 16, 2010, 9:30 a.m.-10:30 a.m.

Session Title: Heart Failure with Preserved Ejection Fraction and Diastolic Function
Abstract Category: Myocardial Function/Heart Failure--Clinical Pharmacological Treatment
Presentation Number: 1236-78

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Background: High blood pressure (BP) is a risk factor for death and heart failure (HF), and lowering BP reduces the risk. Once HF develops, a lower systolic BP (SBP) becomes a risk factor for worse outcomes in patients with HF and low EF. Whether low SBP has a similar relation to outcomes in patients with HF and preserved EF (HFpEF) is unknown. We report the association of baseline SBP to outcomes in patients with HFpEF in the I-Preserve Trial.

Methods: The average SBP in deciles and quartiles (<128, 129-138, 139-145, >145 mmHg) was calculated. Cox proportional hazard regression models were used to relate SBP to the time to death.

Results: Mean ± SD SBP in all the patients was 136 ± 15 mmHg (n=4128). Patients in the lowest SBP quartile (SBP <128 mmHg) were more likely to have been hospitalized in the previous 6 months, have an ischemic etiology, atrial fibrillation, higher NT-proBNP and less likely to have LV hypertrophy. All other baseline characteristics were similar to the upper 3 quartiles. Patients in the lowest quartile had a significantly increased risk of death (HR = 1.35; 95% CI 1.24 - 1.62, p < 0.001) compared to patients in the upper 3 quartiles of SBP. As compared to patients with SBP 130-140 mmHg there was a decile related increase in risk of death in the lower decile and a similar trend in the higher deciles (Figure).

Conclusions: Lower SBP is a risk factor for adverse outcomes in patients with HFpEF, similar to that reported in patients with HF and reduced EF. The optimal SBP in patients with HFpEF remains to be determined.